EVIDENCE BASED CASE REPORT

Do all fractures need full immobilisation?

Paul Glasziou

Professor of evidence based medicine, Centre for Evidence-based Medicine, Department of Primary Health Care, University of Oxford, Oxford OX3 7LF

paul.glasziou@dphpc.ox.ac.uk

BMJ 2007;335:612-3

doi: 10.1136/bmj.39272.565810.80

No—and the hunt for evidence prompted Paul Glasziou to muse about the usefulness of rules of thumb in clinical practice

As I was about to start my morning general practice clinic, the receptionist told me of a patient who was coming in with an injury and handed me a faxed report from radiology, which stated: “possible fracture of the radial head.” The “possible” suggested it was undisplaced or minimally displaced, so I wondered if it needed treating at all. While waiting for the first patient to arrive and sipping my tea, I checked the orthopaedics texts in my room and did a PubMed search.

Searching for the evidence

I went to the Clinical Queries section of PubMed Central (which is bookmarked on my Firefox toolbar) and used the narrow version of the “therapy” filter (which filters for randomised trials). I entered search terms to describe the condition “fracture and radial and head,” which brought up seven studies. Two of these studies were not trials and three were not relevant (two looked at different types of internal fixation, and one looked at different methods of reduction), which left two that were relevant. I used the most recent study (2002)¹ because it was more relevant to this patient’s problem and I had access to the full text. I had access only to the abstract of the second trial,² but this seemed to be consistent with the findings of the first trial. My search took only a few minutes.

Assessing the evidence

The trial¹ randomised 60 patients into two groups. One group was treated with rest in a broad sling for five days followed by mobilisation, and the other was treated with immediate mobilisation and an exercise programme that started 24 hours after injury. The randomisation process was haphazard rather than randomised, but baseline characteristics were not significantly different between the two groups (although the immediate mobilisation group seemed to have had more minor fractures). Follow-up assessments were done by an independent observer who was blinded to treatment, but the authors did not mention loss to follow-up. As is usual, the trial was not perfect, but none of the flaws seemed sufficient to invalidate the results.

All fractures in both groups united without problems. At the end of the first week, the early mobilisation group had slightly more pain (10 *v* 6 on a 25 point scale) but better range of motion (flexion of 112° *v* 98°). However, most measures showed no difference at that time or at further follow-up (four and 12 weeks).

Outcome for the patient

When I saw the patient, it was clear that she had tenderness over the radial head but still had a full—though somewhat painful—range of elbow movement. I explained the choices to her—that immobilisation would help a little with the pain but make no long term difference, and it would mean that temporarily her arm would be a little stiffer. She opted for no immobilisation with a simple bandage for comfort.

Of course, I could have called the local orthopaedic registrar, and that is often the wise thing to do. But once I had seen the patient I was sure that this was just a “minor” fracture that could be dealt with in primary care.

Clinical training and practice is replete with heuristics—rules of thumb—in both diagnosis and treatment. For example, “beware the unilateral red eye,” “if a child fails to speak by 16 months then assume that the child is deaf until proved otherwise,” and “where there is pus, let it out.” One treatment rule we use for soft tissue injury is RICE (rest, ice, compression, and elevation). However, is this rule based on good research? Recently some colleagues and I questioned this advice, and did a systematic review of whether immobilisation is best for the treatment of limb injuries. We identified 49 trials, and we found that less rest and more mobility seemed to be better, even in the 14 studies of fractured limbs.³ Subsequently, a trial showed that short arm plasters were preferable to long arm plasters for forearm fractures in children. Some people have suggested we change the rule from RICE to MICE (mobilisation, ice, compression, elevation). However, applying this general principle to individual patients and injuries is not always straightforward.

I was puzzled about exactly when I can apply the MICE heuristic to injuries, but a helpful reviewer suggested that, “The majority of hand fractures and radial head fractures are now treated by mobilisation. Many minor lower limb fractures are similarly treated. In many distal radial fractures and most proximal humeral

and clavicle fractures, immobilisation is simply for pain relief.” With that clarified, I am now left wondering how many other mnemonics provide misleading advice? Indeed, a colleague—Carl Heneghan—pointed out that the C of RICE is also questionable, with a trial in ankle sprains showing that compression bandages provide no advantage and lead to a greater use of analgesia.⁴

Thanks to the reviewers for helpful comments, in particular, CM Court-Brown for the advice in the final paragraph.

Competing interests: None declared.

Provenance and peer review: Not commissioned; externally peer reviewed.

- 1 Liow RY, Cregan A, Nanda R, Montgomery RJ. Early mobilisation for minimally displaced radial head fractures is desirable. A prospective randomised study of two protocols. *Injury* 2002;33:801-6.
- 2 Unsworth-White J, Koka R, Churchill M, D'Arcy JC, James SE. The non-operative management of radial head fractures: a randomized trial of three treatments. *Injury* 1994;25:165-7.
- 3 Nash CE, Mickan SM, Del Mar CB, Glasziou PP. Resting injured limbs delays recovery: a systematic review. *J Fam Pract* 2004;53:706-12.
- 4 Watts BL, Armstrong B. A randomised controlled trial to determine the effectiveness of double Tubigrip in grade 1 and 2 (mild to moderate) ankle sprains. *Emerg Med J* 2001;18:46-50.

10-MINUTE CONSULTATION

Ramadan fasting and diabetes

Aziz Sheikh,¹ Sunita Wallia²

¹Division of Community Health Sciences, GP Section, University of Edinburgh, Edinburgh EH8 9DX

²Division of Community Health Sciences: Public Health Sciences, University of Edinburgh, Edinburgh EH8 9AG

Correspondence to: A Sheikh
aziz.sheikh@ed.ac.uk

BMJ 2007;335:613-4

doi: 10.1136/bmj.39323.573148.BE

A 45 year old man with type 2 diabetes mellitus consults to discuss how he might fast safely during Ramadan

What issues you should cover

- Explore his motivation—whether he wants to fast (as most will) or whether he is looking for a “legitimate” exemption from fasting on medical grounds. A diagnosis of diabetes does not confer an automatic exemption, so if the second scenario is suspected it needs to be explored with sensitivity.
- Although everyone agrees on the need to avoid food and drink during daylight hours, a range of views exists on the use of drugs. Ask his opinion on the use of oral and injectable drugs when fasting.
- Find out how long the fast will last. The length of the fast varies according to the time of year in which Ramadan falls. Ramadan starts on about 12 September this year and in the United Kingdom the fast will be about 13 hours at the start of the month and 11 hours at the end of the month. If Ramadan falls in the summer, fasts can last for more than 18 hours, in which case fasting for people with diabetes can prove more challenging.
- Inquire about his current treatment regimen, glycaemic control, and comorbidities. Achieving good glycaemic control before Ramadan will make it easier to maintain control while fasting. People taking drugs may need to change their regimens.
- If he has some experience of fasting with diabetes, find out how he fared and if he has any specific concerns.
- Find out whether he has sought religious advice. If fasting is medically detrimental, he needs to know that he is exempt. Some people may want reassurance from religious authorities when deciding not to fast.

What you should do

- Explain that the decision is ultimately his, but that you can advise him and help him maximise his chances of fasting safely. Most people with well controlled diabetes should be able to fast, but if fasting is judged unsafe (in those with brittle diabetes or cardiac or renal complications (or a combination)), clearly communicate this. Most people will be receptive to such advice, even if they choose to ignore it.
- Encourage him (ideally with input from a dietitian trained to deal with cultural issues) to eat foods that are high in dietary fibre (such as whole grains, fruits, and vegetables) and have a low glycaemic index (such as beans and pulses) at the pre-dawn (Suhur) and sunset (Iftar) meals to promote glycaemic control. Discourage him from eating foods with a high glycaemic index (such as more than three dates, which are traditionally used to break the fast) until about half an hour after taking drugs to minimise sharp rises in blood sugar at sunset.
- If blood glucose is well controlled by diet alone, advise him that fasting is safe.
- Self monitoring of blood glucose is essential for safe fasting in patients taking antidiabetic drugs, particularly before and after the pre-dawn and sunset meals. It should guide the individual tailoring of treatment regimens described below.
- To minimise the risk of hypoglycaemia, advise patients taking oral hypoglycaemic agents as follows:
 - If taking a long acting sulphonylurea, switch to a short acting preparation or metformin, or both
 - If a single daily dose is used, take this with the sunset meal
 - If two or three doses are taken each day, take half the normal evening dose before dawn and the normal morning (and any midday) dose after sunset.

This is part of a series of occasional articles on common problems in primary care. The BMJ welcomes contributions from general practitioners to the series

- Advise patients taking insulin as follows:
 - If a once daily dose is used, switch to a twice daily regimen
 - If a twice daily regimen is used, take half of the evening dose before dawn and the normal morning dose after sunset
 - If basal bolus insulin is used, reduce the long acting component to two thirds of normal, split into two equal doses taken during the sunset and pre-dawn meals. Take the rapid acting component as before, but omit the middle dose.
- Emphasise the need to carry dextrose or glucose tablets at all times to treat hypoglycaemia; explain the importance and legitimacy of breaking the fast in emergency situations.
- Encourage moderate exercise.
- Arrange for a review one week into Ramadan or earlier if concerns arise.

Thanks to Eiad Afaris, Domhnall Macauley, Chris Burton, Sangeeta Dhami, Brian McKinstry, Hilary Pinnock, Iftikhar Saraf, and Yasser Shehata for their helpful comments on earlier drafts of this article.

Contributors: AS conceived this article, and he contributed to and edited drafts written by SW. AS is guarantor.

Competing interests: SW and AS are grant holders on a randomised controlled trial of diabetes prevention in South Asians (NPRI/MRC R39913).

Provenance and peer review: Not commissioned; externally peer reviewed.

USEFUL READING

For professionals

Health Scotland. Focus on diabetes: a guide to working with black and minority ethnic communities in Scotland living with long term conditions. www.nhsggcequality.co.uk/equality/mainmenu/home/pdf/focusONdiabetesmar07.pdf

Al-Arouj M, Bouguerra R, Buse J, Hafez S, Hassanein M, Ibrahim MA, et al. Recommendations for management of diabetes during Ramadan. *Diabet Care* 2005;28:2305-11

Mojaddidi M, Hassanein M, Malik R. Prescribing in ethnic groups: Ramadan and diabetes—evidence based guidelines. *Pract Diabet Int* 2006;17:38-43

NHS Ethnicity and Health Specialist Library. www.library.nhs.uk/ethnicity/

Nutrition Subcommittee of the Diabetes Care Advisory Committee of Diabetes UK. The implementation of nutritional advice for people with diabetes. *Diabet Med* 2003;20:786-807

Sadiq A. *Fasting: sacred ritual, modern challenges*. In: Sheikh A, Gatrad AR, eds. *Caring for Muslim patients*, 2nd ed. Oxford: Radcliffe, 2007 (in press)

For patients

Diabetes UK. *Diabetes and Ramadan*. www.diabetes.org.uk/Documents/Languages/English/Ramadan_Eng.pdf

Scottish Nutrition and Diet Resource Initiative. *South Asian balance of good health* (also available in Urdu, Hindi, and Punjabi). Order from www.caledonian.ac.uk/sndri/pdf/OtherHPform.pdf

A paper that changed my practice

It was an article in the *Observer* newspaper about 10 years ago describing how an English and French family had exchanged their 9 year old daughters for six months. Subsequently, my eldest daughter, and then all of my children, went on to do exchanges in France and Germany. You might think that this experience would have little relevance to my practice as a GP, but it shows transformative learning at its best.

For a start, I had to be approved to foster the children privately, was assigned a social worker and had to be monitored by him or her. I always had a different social worker, and I discovered how they work and how they vary.

A new child in the family who does not speak your language quickly teaches you how much you can achieve with non-verbal communication. You also discover how people learn languages when immersed in a new country and what words and phrases are more easily understood. Not only does this help with patients but also with the variety of overseas doctors I have taught for their foundation programme. Passing the Professional and Linguistics Assessment Board (PLAB) exam is not always sufficient for the vagaries of local dialect.

We are taught about achieving shared understanding of health and agreeing management plans with our patients. This has a different dimension when the child is living with you and parents can telephone you at home at any time to express their concerns that their offspring only seems

to receive paracetamol whatever the problem.

I learnt, in a very intimate way, how other families function. Children have a great habit of getting to the nitty-gritty, and it is impossible to be on your best behaviour for six months. Rituals that have grown up for no logical reason are quickly exposed and challenged.

I learnt what it feels like when my children experienced racial discrimination. This happened both to my European children in this country and to my own children abroad.

As a result of the above, and most importantly, I learnt to be more tolerant. Not bad for one newspaper article.

Anne Holmes general practitioner, Tithebarn Medical Centre, Stockton on Tees
anne.holmes@ntlworld.com

We welcome articles up to 600 words on topics such as A memorable patient, A paper that changed my practice, My most unfortunate mistake, or any other piece conveying instruction, pathos or humour. Please submit the article on <http://submit.bmj.com> Permission is needed from the patient or a relative if an identifiable patient is referred to. We also welcome contributions for “Endpieces,” consisting of quotations of up to 80 words (but most are considerably shorter) from any source, ancient or modern, which have appealed to the reader.